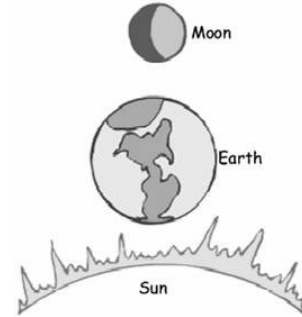




Science Notes: The Moon in Space

- ❖ The moon is about _____ the size of the earth. It has a gravity about _____ that of the earth.

- ❖ Scientists know how far away the moon is because



They bounce a laser off of the mirror and measure the time it takes the beam to return to earth.

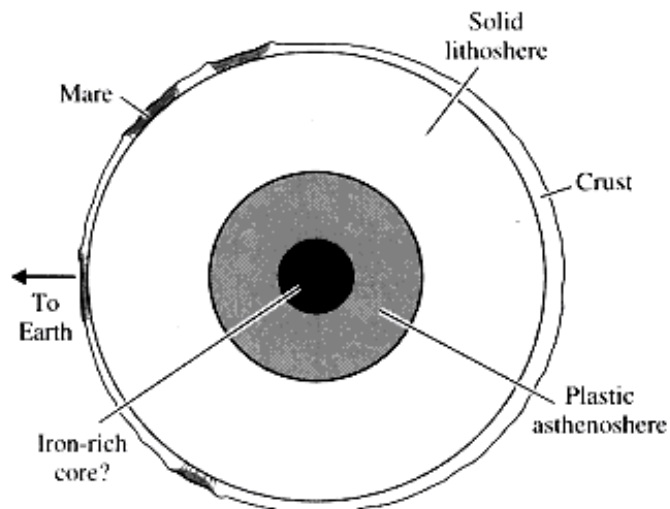
- ❖ The first astronaut on the moon was _____, on _____. He was part of the Apollo 11 program and the Commander of the Apollo 11. Michael Collins was the Command Module Pilot, and Buzz Aldrin was the Lunar Module Pilot

- ❖ Astronauts left instruments on the moon to measure _____. They have measured up to _____ per year!

- ❖ The oldest rocks on the moon are _____ years old. This is about the same age as the oldest earth rocks.

- ❖ It is generally believed that the moon was formed when a Mars-sized body hit the earth during the earth's early history. The impact caused a rocky chunk to be ejected into orbit. It later formed the moon.

- ❖ Scientists believe that the moon, like the earth, has 3 basic layers: the crust, the mantle, and the core.



❖ The moon has several unusual surface features. These 4 main features are:

| <u>Feature</u> | <u>Facts</u> |
|---------------------|----------------------------------|
| 1. Maria | 1. _____ 2. _____ 3. _____ |
| 2. Highlands | 1. _____ 2. _____ 3. _____ |
| 3. Craters | 1. _____ 2. _____ 3. _____ |
| 4. Rilles | 1. _____ 2. _____ 3. _____ |

❖ The moon, like the earth, _____ on its axis. However, its rotation speed is much slower than earth's.

❑ It takes the moon _____ to rotate.

❑ It takes the moon _____ to revolve. The moon revolves _____ around the earth.

- ❑ Why do we only see one side of the moon?

- ❖ Like the earth, the moon travels in an _____ orbit.

- ❖ Because of this there are some points during the moon's revolution when it is

_____.

- ❑ When the moon is closest to the earth it is at _____.

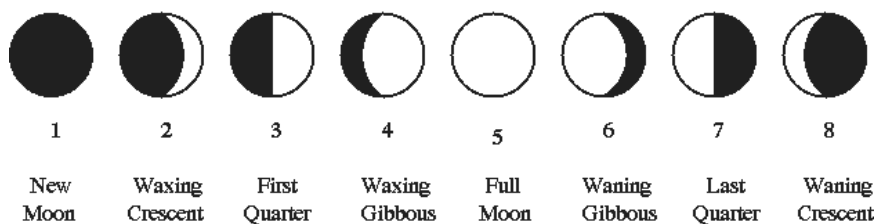
- ❑ When the moon is furthest from the earth it is at _____.

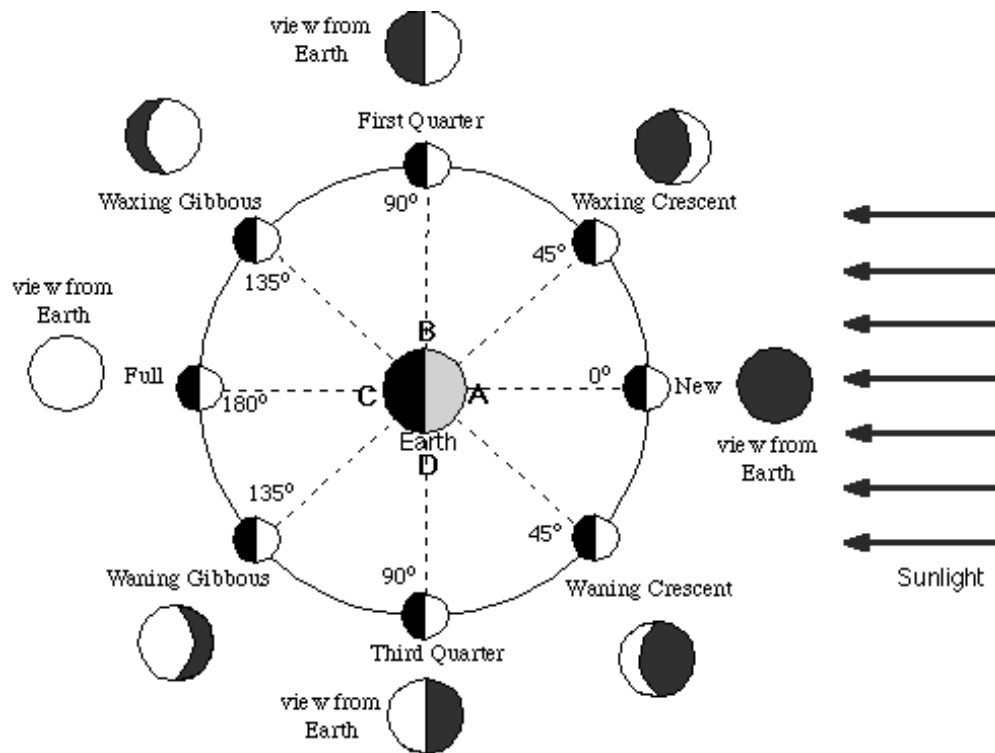
- ❑ The moon _____.

- ❑ It _____.

- ❑ When the light on the moon appears to be increasing, we say that the moon is _____.
- When the light on the moon appears to be decreasing, we say that the moon is _____.

- ❑ Why does the moon appear to change shape?



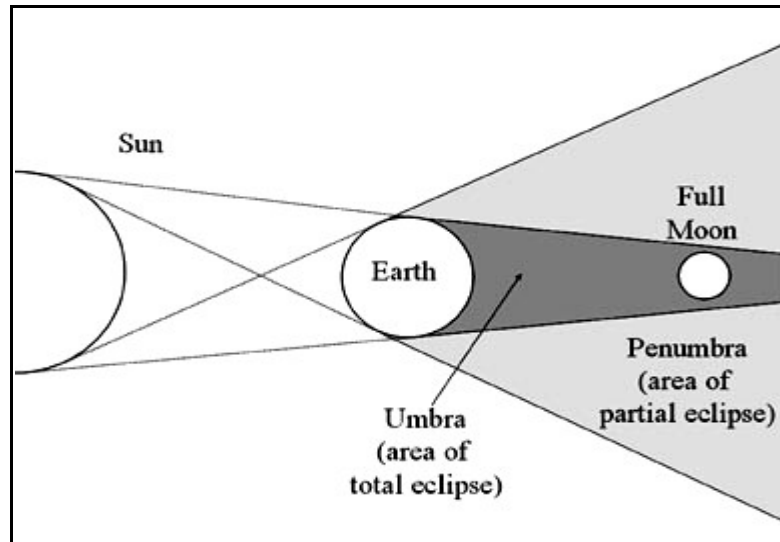


ECLIPSES

- ❖ As the moon revolves around the earth and the earth & moon revolve around the sun, they create cone-shaped shadows from the sun's light. Sometimes the moon moves into the earth's shadow. At other times the moon causes a shadow on earth.
- ❖ The small, completely dark inner shadow created by the moon or earth is called the
_____.
- ❖ The larger outer shadow where light is partly blocked out is the
_____.

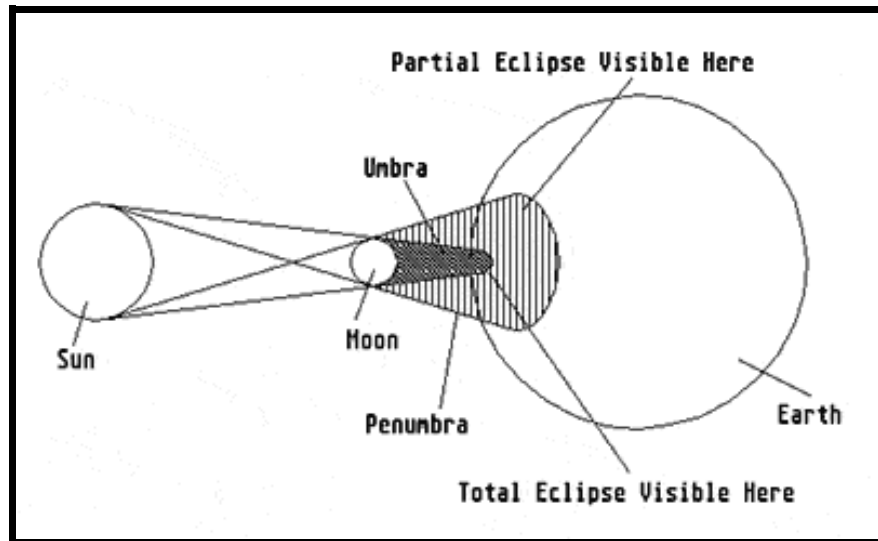
▣ A **LUNAR ECLIPSE** OCCURS WHEN _____

This can only happen during which phase? _____



▣ A **SOLAR ECLIPSE** OCCURS WHEN _____
_____.

This can only happen during which phase? _____.



TIDES?

❖ Tides are _____
_____.

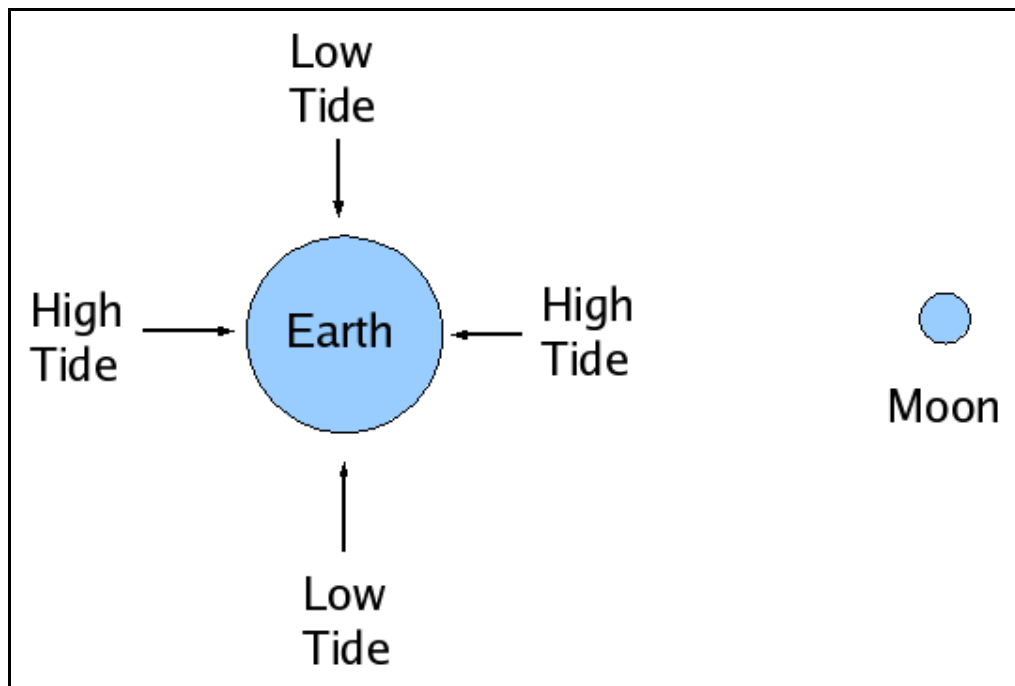
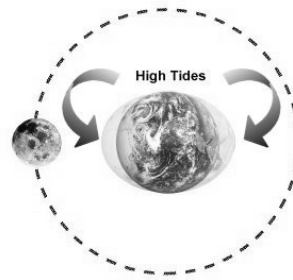
❖ Tides are caused by _____
_____.

❖ High tides and low tides each usually happen _____

It takes about _____ to go from High Tide to Low Tide or Low Tide to High Tide.

❖ It takes about _____ to go from High Tide to High Tide or Low Tide to Low Tide.

❖ High tides occur on the **side of the earth facing the moon** (*and on the opposite side*).



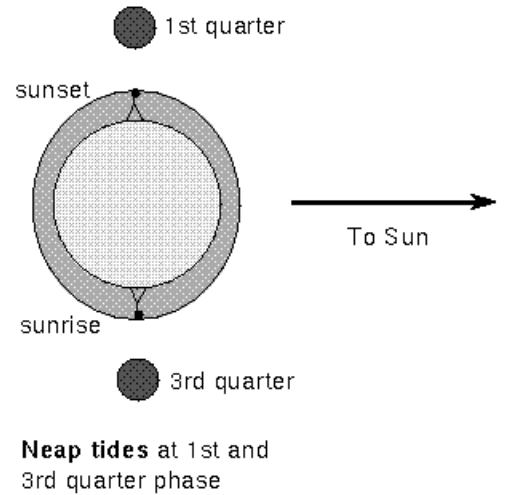
"SPECIAL TIDES"

NEAP TIDES

1. _____

2. _____

3. _____



SPRING TIDES

1. _____
2. _____
3. _____

